



(11) **EP 2 280 289 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
14.12.2011 Bulletin 2011/50

(51) Int Cl.:
G01S 7/40 (2006.01) G01S 13/56 (2006.01)
H01Q 19/10 (2006.01)

(43) Date of publication A2:
02.02.2011 Bulletin 2011/05

(21) Application number: **10170993.9**

(22) Date of filing: **28.07.2010**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR
Designated Extension States:
BA ME RS

(72) Inventors:
• **Murakami, Tadasi**
Osaka (JP)
• **Sobagaki, Tamami**
Kyoto (JP)
• **Gotou, Shigeo**
Osaka (JP)

(30) Priority: **28.07.2009 JP 2009175900**

(74) Representative: **Rüger, Barthelt & Abel**
Patentanwälte
Webergasse 3
73728 Esslingen (DE)

(71) Applicant: **Panasonic Electric Works Co., Ltd.**
Kadoma-shi
Osaka 571-8686 (JP)

(54) **Human body detecting device**

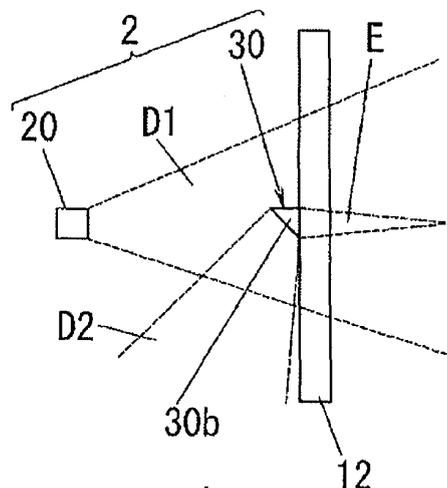
(57) [Summary]

[Object] To set detection areas to both a front first area and a second area other than the first area without greatly deteriorating sensitivity in the first area.

[Means for Settlement] A human body detecting device 2 includes: a sensor main body 20 emitting a millimeter wave, receiving the radio wave reflected by a human body, a floor or a wall, and determining whether a person

is present according to a difference between a frequency of the emitted radio wave and a frequency of the received radio wave; and a reflector 30 reflecting a part of the radio wave emitted by the sensor main body 20. The sensor main body 20 emits the radio wave toward a first area D1 in front of the sensor main body 20, and the reflector 30 reflects the radio wave toward a second area D2 other than the first area. The first area D1 and the second area D2 are set to detection areas, respectively.

Figure 1



EP 2 280 289 A3



EUROPEAN SEARCH REPORT

Application Number
EP 10 17 0993

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	GB 2 312 992 A (PYRONIX LTD [GB]) 12 November 1997 (1997-11-12) * abstract * * page 3, line 16 - page 10, line 9 * * figures 1-3 * * claims 1, 4-7, 9, 14 * -----	1-3	INV. G01S7/40 G01S13/56 H01Q19/10
X	US 3 911 443 A (KORTA LAWRENCE B ET AL) 7 October 1975 (1975-10-07) * abstract * * column 1, line 5 - column 5, line 40 * * figures 1, 2, 5 * * claim 1 * -----	1-3	
			TECHNICAL FIELDS SEARCHED (IPC)
			H01Q G01S
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		4 November 2011	Van den Bosch, I
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

4 EPO FORM 1503 03.82 (P04001)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 10 17 0993

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

04-11-2011

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2312992 A	12-11-1997	AU 2708697 A WO 9743662 A1	05-12-1997 20-11-1997
-----	-----	-----	-----
US 3911443 A	07-10-1975	NONE	
-----	-----	-----	-----

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82